

Surface Mining Reclamation and Enforcement, Interior

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(ii) Eliminate the highwall to the extent practicable.

[44 FR 30628, May 25, 1979, as amended at 46 FR 37233, July 17, 1981; 47 FR 18555, Apr. 29, 1982]

§ 715.16 Topsoil handling.

To prevent topsoil from being contaminated by spoil or waste materials, the permittee shall remove the topsoil as a separate operation from areas to be disturbed. Topsoil shall be immediately redistributed according to the requirements of paragraph (b) of this section on areas graded to the approved postmining configuration. The topsoil shall be segregated, stockpiled, and protected from wind and water erosion and from contaminants which lessen its capability to support vegetation if sufficient graded areas are not immediately available for redistribution.

(a) *Topsoil removal.* All topsoil to be salvaged shall be removed before any drilling for blasting, mining, or other surface disturbance.

(1) All topsoil shall be removed unless use of alternative materials is approved by the regulatory authority in accordance with paragraph (a)(4) of this section. Where the removal of topsoil results in erosion that may cause air or water pollution, the regulatory authority shall limit the size of the area from which topsoil may be removed at any one time and specify methods of treatment to control erosion of exposed overburden.

(2) All of the A horizon of the topsoil as identified by soil surveys shall be removed according to paragraph (a) and then replaced on disturbed areas as the surface soil layers. Where the A horizon is less than 6 inches, a 6-inch layer that includes the A horizon and the unconsolidated material immediately below the A horizon (or all unconsolidated material if the total available is less than 6 inches) shall be removed and the mixture segregated and replaced as the surface soil layer.

(3) Where necessary to obtain soil productivity consistent with postmining land use, the regulatory authority may require that the B horizon or portions of the C horizon or other underlying layers demonstrated to have comparable quality for root de-

velopment be segregated and replaced as subsoil.

(4) Selected overburden materials may be used instead of, or as a supplement to, topsoil where the resulting soil medium is equal to or more suitable for vegetation, and if all the following requirements are met:

(i) The permittee demonstrates that the selected overburden materials or an overburden-topsoil mixture is more suitable for restoring land capability and productivity by the results of chemical and physical analyses. These analyses shall include determinations of pH, percent organic material, nitrogen, phosphorus, potassium, texture class, and water-holding capacity, and such other analyses as required by the regulatory authority. The regulatory authority also may require that results of field-site trials or greenhouse tests be used to demonstrate the feasibility of using such overburden materials.

(ii) The chemical and physical analyses and the results of field-site trials and greenhouse tests are accompanied by a certification from a qualified soil scientist or agronomist.

(iii) The alternative material is removed, segregated, and replaced in conformance with this section.

(b) *Topsoil redistribution.* (1) After final grading and before the topsoil is replaced, regraded land shall be scarified or otherwise treated to eliminate slippage surfaces and to promote root penetration.

(2) Topsoil shall be redistributed in a manner that—

(i) Achieves an approximate uniform thickness consistent with the postmining land uses;

(ii) Prevents excess compaction of the spoil and topsoil; and

(iii) Protects the topsoil from wind and water erosion before it is seeded and planted.

(c) *Topsoil storage.* If the permit allows storage of topsoil, the stockpiled topsoil shall be placed on a stable area within the permit area where it will not be disturbed or be exposed to excessive water, wind erosion, or contaminants which lessen its capability to support vegetation before it can be redistributed on terrain graded to final contour. Stockpiles shall be selectively placed and protected from wind and

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water erosion, unnecessary compaction, and contamination by undesirable materials either by a vegetative cover as defined in §715.20(g) or by other methods demonstrated to provide equal protection such as snow fences, chemical binders, and mulching. Unless approved by the regulatory authority, stockpiled topsoil shall not be moved until required for redistribution on a disturbed area.

(d) *Nutrients and soil amendments.* Nutrients and soil amendments in the amounts and analyses as determined by soil tests shall be applied to the surface soil layer so that it will support the postmining requirements of §715.13 and the revegetation requirements of §715.20.

§715.17 Protection of the hydrologic system.

The permittee shall plan and conduct coal mining and reclamation operations to minimize disturbance to the prevailing hydrologic balance in order to prevent long-term adverse changes in the hydrologic balance that could result from surface coal mining and reclamation operations, both on- and off-site. Changes in water quality and quantity, in the depth to ground water, and in the location of surface water drainage channels shall be minimized such that the postmining land use of the disturbed land is not adversely affected and applicable Federal and State statutes and regulations are not violated. The permittee shall conduct operations so as to minimize water pollution and shall, where necessary, use treatment methods to control water pollution. The permittee shall emphasize surface coal mining and reclamation practices that will prevent or minimize water pollution and changes in flows in preference to the use of water treatment facilities. Practices to control and minimize pollution include, but are not limited to, stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, lining drainage channels with rock or vegetation, mulching, sealing acid-forming and toxic-forming materials, and selectively placing waste materials in back-fill areas. If pollution can be controlled only by treatment, the permittee shall

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operate and maintain the necessary water-treatment facilities for as long as treatment is required.

(a) *Water quality standards and effluent limitations.* All surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond or a series of sedimentation ponds before leaving the permit area. Sedimentation ponds shall be retained until drainage from the disturbed areas has met the water quality requirements of this section and the revegetation requirements of §715.20 have been met. The regulatory authority may grant exemptions from this requirement only when the disturbed drainage area within the total disturbed area is small and if the permittee shows that sedimentation ponds are necessary to meet the effluent limitations of this paragraph and to maintain water quality in downstream receiving waters. For purpose of this section only, disturbed area shall not include those areas in which only diversion ditches, sedimentation ponds, or roads are installed in accordance with this section and the upstream area is not otherwise disturbed by the permittee. Sedimentation ponds required by this paragraph shall be constructed in accordance with paragraph (e) of this section in appropriate locations prior to any mining in the affected drainage area in order to control sedimentation or otherwise treat water in accordance with this paragraph. Discharges from areas disturbed by surface coal mining and reclamation operations must meet all applicable Federal and State laws and regulations and, at a minimum, the following numerical effluent limitations:

EFFLUENT LIMITATIONS, IN MILLIGRAMS PER LITER, MG/L, EXCEPT FOR PH

Effluent characteristics	Maximum allowable ¹	Average of daily values for 30 consecutive discharge days ¹
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
Total suspended solids ²	70.0	35.0
pH ³	(4)	(4)

¹ Based on representative sampling.